

NEW SPECIES OF NORTH AMERICAN *PITYOPHTHORUS*
EICHHOFF (COLEOPTERA: SCOLYTIDAE)

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Several undescribed species of the large and difficult genus *Pityophthorus* have accumulated in recent years. Because of special interest in the biology and economic importance of these insects names must be made available for them. On the following pages twelve species are described as new to science; four are from the United States and eight are from Mexico.

Pityophthorus toralis, n. sp.

This species is allied to *anceps* Blackman and *alpinensis* Hopping, but is readily distinguished by the somewhat irregular rows of stria punctures, by the larger and more abundant stria and interstria punctures, and by the deeper, wider declivital sulcus.

FEMALE.—Length 2.3 mm. (paratypes 2.1-2.4), 2.6 times as long as wide; body color very dark brown to black.

Frons broadly flattened between eyes from epistoma to well above eyes, with median half subconcave; gradually raised toward epistomal margin and with a conspicuous, distinctly elevated transverse epistomal process (much more conspicuous than in allied species); surface rather coarsely, closely punctured; vestiture fine, moderately abundant, uniformly covering entire flattened surface, but longer at margins. Eye and antenna as in allied species, except first suture of club more distinctly procurved.

Pronotum 1.04 times as long as wide, widest on basal third; sides arcuate behind, rather strongly constricted one-third from anterior margin; anterior margin rather narrowly rounded and bearing 10-12 serrations, those at center moderately large and sharp, decreasing to obscurity laterally; summit at middle, poorly developed; posterior area subshining, rather finely punctured, rim of each puncture subgranulate on side opposite summit. Vestiture short, inconspicuous, semirecumbent.

Elytra 1.8 times as long as wide; sides almost straight and subparallel on basal three-fourths, rather broadly rounded behind; striae not impressed, in irregular rows, the punctures moderately large and deep, distinct, smaller toward declivity; interstriae about two and one-half times as wide as striae, the surface with minute points and with moderately abundant irregular lines, the punctures almost equal in size and abundance to those of striae on anterior half, smaller and less abundant posteriorly. Declivity gradual, rather broadly sulcate; striae one and two obsolete, three minutely punctured; sutural interspace sharply, moderately raised and bearing a

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row of rather closely placed, minute, pointed granules, two more than twice as wide as one, flat, smooth, shining, three gradually raised and bearing a row of granules, the granules slightly larger than those of interspace one. Ninth interspace elevated. Subglabrous.

MALE.— Similar to female except frons convex above, transversely impressed below, with a low median carina from upper level of eyes to epistomal margin, the vestiture inconspicuous; pronotal asperities a little larger; striae and interstriae punctures a little smaller.

TYPE LOCALITY.— Beaver Creek, Logan Canyon, Utah.

TYPE MATERIAL.— The female holotype, male allotype, and 56 paratypes were collected at the type locality on June 14, 1947, from small branches of *Pinus flexilis*, by S. L. Wood.

The holotype, allotype and most of the paratypes are in my collection; other paratypes are in the collection of the U. S. National Museum.

Pityophthorus borrichiae, n. sp.

This representative of Blackman's group II is more nearly allied to *natalis* Blackman than to other known species, but is not closely related. From all other North American representatives of group II it differs by the convex, glabrous frons of the female, by the more slender body form, and by the reticulate posterior area of the pronotum.

FEMALE.— Length 1.2 mm. (paratypes 1.0-1.3), 2.8 times as long as wide; body color very dark brown.

Frons convex, very feebly, transversely impressed above epistoma, surface minutely strigose above, almost smooth below, with rather sparse, coarse, deep punctures over entire surface. Vestiture very short, sparse and inconspicuous except along epistoma. Eye emarginate; finely granulate. Antennal club small, the sutures straight and inconspicuous.

Pronotum 1.2 times as long as wide, widest at base; sides very weakly arcuate, very slightly converging anteriorly, rather broadly rounded in front; asperities fused to form two continuous concentric ridges in addition to the marginal row and one or two indefinite rows at summit; summit rather indefinite, in front of middle; posterior area finely reticulate, the punctures moderately large, very deep, sharp, not close. Glabrous, except at margins.

Elytra 1.7 times as long as wide; sides straight and subparallel on basal two-thirds, very broadly rounded behind; striae not impressed, in definite rows, the punctures rather large, deep, distinct; interstriae slightly wider than striae, impunctate, shining but marked by minute points and surface lines. Declivity steep, flattened; striae punctures not reduced, interspace two flat, impressed; interspaces one and three as wide as two, rather strongly raised and each bearing a row of rather large, rounded granules. Vestiture confined to sides and declivity; those on interspaces one and three short and stout, absent on two.

MALE.— Similar in all respects to female; distinguished only by segmentation of abdomen.

TYPE LOCALITY.— Key Largo, Florida.

TYPE MATERIAL.— The female holotype, male allotype, and 28 paratypes were collected at the type locality on June 25, 1951, from stems of *Borrchia arborescens* by S. L. Wood. Two other paratypes were taken at the same locality and date from *B. frutescens*.

The holotype, allotype and some paratypes are in my collection, other paratypes are in the Francis Huntington Snow Entomological Museum and the U. S. National Museum.

Pityophthorus atomus, n. sp.

This minute species is rather closely allied to *natalis* Blackman (group II), but is readily distinguished by the absence of minute points between punctures on the posterior areas of the thorax, by the smaller strial punctures, by the more narrowly rounded apex of the declivity, and by the very small size.

FEMALE.— Length 0.9 mm. (paratypes 0.85-1.25), 2.7 times as long as wide; body color dark reddish brown.

Frons flat on a rather small semicircular area from well above upper level of eyes to epistomal margin; surface shining, minutely, rather closely, finely punctured; vestiture consisting of fine moderately abundant, rather short hairs of equal length. Eye emarginate; finely granulate. Antennal club small, oval, almost devoid of setae except at margins, the sutures straight.

Pronotum 1.04 times as long as wide; sides on basal half almost straight and subparallel, rather broadly rounded in front; anterior margin armed by about a dozen small teeth; asperities arranged in two concentric rows with about two more partial, irregular rows at summit; summit at middle, feebly impressed behind; posterior areas smooth with a few obscure points evident, shining, punctures small, rather sparse, deep, becoming minute laterally; a sharp, narrow median ridge extending from summit about three-fourths of distance to posterior margin.

Elytra 1.8 times as long as wide; sides almost straight and subparallel on basal three-fourths, subacuminate behind; strial punctures in rows, the punctures small, rather deep; interstriae as wide as striae, almost smooth, with very minute points evident, impunctate. Declivity steep, bisulcate; strial punctures clearly evident but reduced somewhat in size; sutural interspaces moderately elevated and bearing a row of rather large rounded granules, interspace two not wider than one, impressed, flat, almost smooth; interspace three elevated, as high as one, bearing a row of about six rather large granules. Vestiture confined to declivity, moderately long, rather stout.

MALE.— Similar to female except frons feebly convex, more coarsely punctured, vestiture sparse; declivital bristles very stout.

TYPE LOCALITY.— Vera Cruz, Vera Cruz, Mexico.

TYPE MATERIAL.— The female holotype, male allotype and 11 paratypes were collected at the type locality on June 30, 1953, from a common small shrubby plant that was growing on sand dunes near the southwestern limits of the city.

The holotype, allotype and some paratypes are in my collection; other paratypes are in the collection of the Francis Huntington Snow museum.

Pityophthorus pusillus, n. sp.

This species is closely allied to *atomus*, but is distinguished by the deeper, wider declivital sulcus, by the shorter, less conspicuous vestiture of the female frons, and by the more coarsely punctured frons and more conspicuous transverse carina on the frons of the male.

FEMALE.— Length 1.1 mm. (paratypes 0.9 to 1.2), 2.9 times as long as wide; body color very dark reddish brown.

Frons flattened on a rather small semicircular area from well above upper level of eyes to epistomal margin; surface shining, finely, closely punctured; vestiture consisting of sparse, fine uniformly distributed rather short setae of equal length. Eye emarginate; finely granulate. Antennal club as in *atomus*.

Pronotum 1.06 times as long as wide; sides on basal half almost straight and subparallel, rather broadly rounded in front; anterior margin armed by about a dozen small teeth; asperities arranged in two concentric rows with about two more partial, irregular rows at summit; summit at middle, feebly impressed behind; posterior areas smooth, shining, with a few obscure points evident, punctures small, rather sparse, deep, becoming minute laterally; a sharp, narrow, median ridge extending from summit about three-fourths of the distance to posterior margin.

Elytra 1.9 times as long as wide; sides almost straight and subparallel on basal three-fourths, subacuminate behind; strial punctures in rows, the punctures small, rather deep; interstriae as wide as striae, almost smooth, with very minute points evident, impunctate. Declivity steep, bisulcate; strial punctures clearly evident but reduced in size; sutural interspaces moderately elevated and bearing a row of rather large rounded granules; interspace two much wider than one or three, strongly impressed, smooth; interspace three elevated, as high as one bearing a row of about six rather large granules. Vestiture confined to declivity, moderately long, rather stout.

MALE.— Similar to female except frons convex, transversely impressed, with a moderately developed transverse carina at upper level of eyes; declivital bristles very stout.

TYPE LOCALITY.— Nine miles south of Zimapan, Hidalgo, Mexico.

TYPE MATERIAL.— The female holotype, male allotype and 18 paratypes were collected at the type locality on June 23, 1953, at an elevation of 6100 feet, from branches of an unknown roadside shrub, by S. L. Wood.

The holotype, allotype and some paratypes are in my collection. Other paratypes are in the Francis Huntington Snow Museum and in the U. S. National Museum.

Pityophthorus paulus, n. sp.

The female of this species has the frons convex and devoid of special vestiture, as in *regularis* Blackman, but the declivity is much steeper and more strongly bisculate than in *regularis*.

FEMALE.— Length 1.4 mm. (paratypes 1.2-1.4), 2.9 times as long as wide; body color dark reddish brown.

Frons convex, median line indistinctly raised from vertex to epistoma; surface reticulate, becoming minutely rugose above, more nearly smooth below, the punctures coarse, moderately close below; vestiture short scanty, hairlike, similar to that of male. Eye emarginate; finely granulate. Sutures of antennal club straight, scarcely visible on middle third.

Pronotum about 1.1 times as long as wide; sides almost straight and subparallel on basal half, rather broadly rounded in front; anterior margin armed by a row of about a dozen, small, indistinct basally fused teeth; asperities fused to form three conscentric rows. a partial fourth row at summit; summit at middle, without transverse impression; posterior areas reticulate, indistinctly so behind summit, the punctures coarse, deep, moderately close, with median line impunctate. Glabrous.

Elytra 1.7 times as long as wide; sides straight and subparallel on basal two-thirds, very broadly rounded behind (almost straight on median half); striae not impressed, the punctures in rows, small, deep; interstriae almost smooth, a few points and lines evident, as wide as striae, impunctate. Declivity very steep, shallowly bisulcate; sutural interspaces rather wide, abruptly raised, bearing a row of about seven large granules; interspace two not wider than one, narrower above, flat below, evidently smooth; interspace three elevated, as high as one, and armed by a row of granules similar to those on one; striae one and two punctured throughout, one narrowly impressed at upper margin of declivity. Vestiture largely confined to sides and declivity, long, except blunt on declivital interspaces one and three, shorter on one.

MALE.— Similar to the female except frons very slightly, transversely impressed between upper level of eyes and epistoma; teeth on anterior margin of pronotum slightly larger; and lateral elevations of declivity a little higher.

TYPE LOCALITY.— Twenty-four miles northeast of Jacala, Hidalgo, Mexico.

TYPE MATERIAL.— The female holotype, male allotype and 18 paratypes were taken at the type locality on June 22, 1953, at an elevation of 4800 feet, from small branches of a roadside shrub (about four feet in height).

The holotype, allotype and some paratypes are in my collection;

other paratypes are in collections of the Francis Huntington Snow Museum and the U. S. National Museum.

Pityophthorus nanus, n. sp.

The declivity of this species is more nearly like that of *concentralis* Eichhoff than to other group II species known to me, although it is not closely related. The simple declivital sculpture and the frontal characters distinguish it from other species.

FEMALE.— Length 1.5 mm. (paratypes 1.2-1.5), 3.0 times as long as wide; body color reddish brown.

Frons flattened on a semicircular area; very closely, rather coarsely, uniformly punctured; vestiture abundant, of uniform length, long, the longest setae about equal to length to antennal club. Eye and antenna as in allied species.

Pronotum 1.2 times as long as wide; sides almost straight and subparallel on basal half, rather narrowly rounded in front; anterior margin armed by a row of about twelve basally fused teeth; asperities fused to form four concentric rows, partial fifth and sixth rows are evident at summit; summit in front of middle, weakly impressed behind summit; posterior areas moderately shining, with some minute points, the punctures small, deep, less numerous along median line. Glabrous.

Elytra 2.0 times as long as wide; sides straight and subparallel on almost basal three-fourths, rather narrowly rounded behind; sutural striae feebly impressed, more strongly behind, the punctures moderately large, close; interstriae as wide as striae, smooth with a few obscure, minute points, impunctate. Declivity moderately steep, shallowly bisulcate, somewhat opalescent; strial punctures greatly reduced, but clearly evident; sutural interspace rather wide, abruptly, moderately elevated, smooth, unarmed; interspace two wider than one or three, almost flat, smooth; interspace three very gradually raised, slightly higher than one, unarmed, but with a few fine setiferous punctures. Vestiture confined to sides and declivity; very fine, rather short.

MALE.— Similar to the female except frons convex above upper level of eyes, transversely impressed below, the impression formed abruptly at upper level of eyes, transversely impressed below, the impression formed abruptly at upper level of eyes creating an almost carina-like callus; and teeth on anterior margin of pronotum slightly larger.

TYPE LOCALITY.— Totalapan, Oaxaca, Mexico.

TYPE MATERIAL.— The female holotype, male allotype, and seven paratypes were taken at the type locality on July 7, 1953, at an elevation of 3300 feet, from a broken branch of an unknown tree.

The holotype, allotype, and some paratypes are in my collection; other paratypes are in collections of the Francis Huntington Snow Museum and the U. S. National Museum.

Pityophthorus dolus, n. sp.

This species is more closely allied to *monophyllae* Blackman than to other known species, but is distinguished by the coarse pronotal and elytral punctures, by the distinct declivital punctures, by the impressed female frons, and by the longer, lower frontal carina of the male.

FEMALE.— Length 1.3 mm. (paratypes 1.2-1.4), 2.8 times as long as wide; body color very dark brown.

Frons flattened from eye to eye, gradually, transversely impressed above epistoma; surface rather sparsely punctured, the punctures distinctly larger than in *monophyllae*; vestiture as in *monophyllae*.

Pronotum very slightly longer than wide; similar to but more broadly rounded in front than in *monophyllae*; anterior margin bearing four serrations, the median pair rather widely set but with their bases almost touching; posterior area subshining, with minute points, the punctures rather large, deep, close; vestiture evident only at sides.

Elytra 1.8 times as long as wide; sides almost straight and subparallel on basal two-thirds, rather narrowly rounded behind; striae not impressed, the punctures small, in irregular rows; interstriae almost smooth, subshining, with a few scattered punctures equal in size to those of striae. Declivity moderately steep, convex; first striae strongly impressed, the punctures only slightly smaller than on disc, other striae not impressed but the punctures strongly reduced; sutural interspace abruptly, slightly elevated, unarmed, two and three smooth, three with minute punctures. Vestiture consisting of minute strial and interstitial hairs, sometimes longer at sides.

MALE.— Similar to the female except frons weakly convex, with a fine, low median carina on lower half; punctures of pronotum and elytra smaller; punctures on declivity greatly reduced, scarcely visible.

TYPE LOCALITY.— McCloud, Siskiyou County, California.

TYPE MATERIAL.— The female holotype, male allotype and 24 paratypes were taken at the type locality on June 14, 1961, from twigs of *Pinus ponderosa*, by S. L. Wood, D. E. Bright, and J. B. Karren.

The holotype, allotype and most of the paratypes are in my collection; other paratypes are in the U. S. National Museum.

Pityophthorus limatus, n. sp.

This species is rather closely allied to *watsoni* Schedl, but is readily distinguished by the much smaller pronotal and elytral punctures, by the more broadly rounded apex of the elytra, and by the very different frontal vestiture of the female.

FEMALE.— Length 1.8 mm. (paratypes 1.4-2.1), 3.0 times as long as wide; body color reddish brown to brown.

Frons flattened on a subcircular area from vertex to epistoma, densely, finely punctured; vestiture erect, dense, of uniform length, each hair scarcely longer than a distance equal to one-half width of upper part of eye. Eye and antenna as in allied species.

Pronotum 1.1 times as long as wide; sides almost straight and subparallel on posterior half, rather broadly rounded in front; anterior margin armed by twelve moderately large, pointed serrations; summit at middle, moderately impressed behind summit; posterior area smooth, subshining, with numerous very minute points, punctures small, deep, not close. Glabrous, except at margin.

Elytra 1.9 times as long as wide; sides straight and subparallel on basal three-fourths, rather narrowly rounded behind; sutural striae feebly impressed on posterior half; strial punctures in slightly irregular rows, small, shallow; interspaces subshining, with abundant, minute, indistinct points, punctures absent. Declivity moderately steep, bisulcate; all punctures obsolete; sutural interspace rather abruptly elevated, somewhat inflated on lower fourth, armed by a row of small tubercles; sulcus rather wide, very smooth, shining; lateral margins moderately elevated and bearing a row of about six small tubercles.

MALE.— Similar to female except frons convex, with a broad somewhat indefinite transverse carina just above upper level of eyes, finely punctured below, rather coarsely punctured above.

TYPE LOCALITY.— Sanford Canyon, Dixie National Forest, Utah.

TYPE MATERIAL.— The female holotype, male allotype and 24 paratypes were collected at the type locality on June 22, 1960, from branches of *Picea pungens*, by S. L. Wood. Ten additional paratypes were taken at Parowan Canyon, Utah, on June 20, 1960, from the same host and collector. Four paratypes are from McKee Draw, Ashley National Forest, Utah, taken June 22, 1960, from the same host and collector.

The holotype, allotype and most of the paratypes are in my collection; other paratypes are in the U. S. National Museum.

Pityophthorus elatinus, n. sp.

This unique species belongs to Blackman's group V, but it represents a subgroup previously unknown to me. The small antennal club and absence of interstrial punctures resemble those of species in group VII, but the male carina and the declivity indicate a closer relationship to group V.

FEMALE.— Length 2.1 (paratypes 2.0-2.2), 2.9 times as long as wide; body color very dark brown, the elytra lighter in color.

Frons flattened from eye to eye, from epistoma to well above eyes; surface smooth with sparse very fine punctures; vestiture short and sparse in central area, long and abundant at margins, the long setae equal in length or slightly exceed diameter of flattened area. Eye emarginate; finely granulate. Antennal club 1.2 times as

long as wide, segments two and three equal in width; first suture straight, second weakly arcuate.

Pronotum 1.03 times as long as wide; sides almost straight and subparallel on basal half, moderately constricted behind the broadly rounded anterior margin; anterior margin armed by about a dozen low serrations; summit at middle, rather strongly impressed behind summit; posterior and lateral areas irregular, evidently granulose-reticulate with minute points intermixed, most punctures replaced by small, rounded isolated granules behind summit, finely and irregularly punctured in lateral areas. Vestiture short, inconspicuous except at sides.

Elytra 1.8 times as long as wide; sides straight and subparallel on basal two-thirds, tapered posteriorly, then broadly rounded behind; sutural striae weakly impressed, others not impressed, the punctures in definite rows, small, close, shallow; interstriae about twice as wide as striae, smooth, impunctate except at margin of declivity. Declivity steep, narrowly sulcate; punctures of first and second striae obsolete; sutural interspaces abruptly, moderately elevated, more strongly below, armed by about ten minute granules (some may take the form of punctures); interspace two broad, impressed, smooth; interspace three strongly elevated on upper half, higher than one, forming a small hump about middle of declivity causing the sulcus to be narrow above, wider below, some punctures on elevated portion minutely indefinitely granulate. Elytra glabrous except at sides.

MALE.— Similar to female except frons convex, rather finely punctured, with a fine, low, acute median carina on lower half; antennal club narrower, 1.3 times as long as wide; declivital margins much more strongly elevated, unarmed, the sutural interspace bearing a row of moderately long, stout semirecumbent setae that extend laterally from their bases; interspace three bearing a row of short stout setae on upper third of declivity.

TYPE LOCALITY.— Twenty-five miles west Ciudad Hidalgo, Michoacan, Mexico.

TYPE MATERIAL.— The female holotype, male allotype and five paratypes were taken on July 16, 1953, at an elevation of 8900 feet, from transverse galleries in branches of an *Abies* species, by S. L. Wood.

The holotype, allotype and some paratypes are in my collection; other paratypes are in the Francis Huntington Snow Museum and in the U. S. National Museum.

Pityophthorus abiagnus, n. sp.

Evidently this species is more closely allied to *immanis* Blackman than to other known species, but is distinguished by the smaller size, by the less numerous interstitial granules on the disc, and by the more regularly spaced sutural granules on the declivity.

FEMALE.— Length 2.2 mm. (paratypes 2.1-2.4), 2.6 times as long as wide; body color very dark brown.

Frons planoconvex over a broad area, finely, rather closely punctured; vestiture fine, long uniformly distributed, setae at periphery only slightly longer than at center. Eye finely granulate; emarginate. Antennal club small, widest through second segment, about 1.2 times as long as wide.

Pronotum equal in length and width, widest at base, the sides feebly arcuate and converging slightly toward the broadly rounded anterior margin, a definite lateral constriction just behind anterior margin; anterior margin armed by about twelve low serrations; summit at middle, moderately impressed behind summit; posterior and lateral areas subshining, the surface smooth with very abundant minute points, the punctures rather large, close, deep, impunctate along median line. Vestiture sparse, minute, inconspicuous.

Elytra 1.7 times as long as wide; sides straight and subparallel on basal two-thirds, then slightly tapered, and finally broadly rounded behind; surface subshining, minutely, indefinitely reticulate; sutural striae weakly impressed, others not at all, the punctures in rows, rather small, distinct, reduced in size on anterior one-fourth; interstriae as wide as striae, each with about two or three punctures irregularly placed. Declivity steep, bisulcate; punctures of striae one and two obsolete; sutural interspace abruptly, moderately elevated and bearing about ten widely spaced, minute granules; interspace two wider than one or three, impressed, almost smooth; interspace three moderately elevated, much higher than one, and bearing a row of about six widely spaced, coarse teeth. Vestiture hair-like, largely confined to sides.

MALE.— Similar to female except frons convex, with a well developed transverse carina at upper level of eyes, a median carina also indicated; the surface coarsely punctured; pronotal and declivital armature more coarsely developed, with a partial double row of tubercles near base of declivity on interspace three; a row of very short, stout setae on upper half of third declivital interspace.

TYPE LOCALITY.— Four miles west of Rio Frio, Mexico, Mexico.

TYPE MATERIAL.—The female holotype, male allotype and 10 paratypes were taken at the type locality on July 14, 1953, at an elevation of 9800 feet, from branches of an *Abies* species, by S. L. Wood.

The female holotype, male allotype and some paratypes are in my collection, other paratypes are in collections of the Francis Huntington Snow Museum and the U. S. National Museum.

Pityophthorus cristatus, n. sp.

This odd species probably should be placed in Blackman's group VII, but it is not at all closely related to any known species. The sexes are almost indistinguishable, both have the declivity oblique and excavated with the lateral margins acutely elevated from the top of interspace two, around the elytral apex, to the opposite interspace two.

FEMALE.— Length 1.6 mm. (paratypes 1.5-1.9), 2.6 times as long as wide; body color dark reddish brown.

Frons convex, somewhat flattened, surface coarsely punctured above and at sides, somewhat more finely punctured below on median half; vestiture inconspicuous, consisting of a few scattered hairs of medium length. Eye emarginate; finely granulate. Antennal club widest through second segment, sutures one and two weakly procurved.

Pronotum 1.05 times as long as wide; sides almost straight and subparallel on basal half, weakly constricted one-third from the broadly rounded anterior margin; asperities confused, summit at middle, transverse impression behind summit rather well developed; anterior margin armed by a row of about ten low teeth (somewhat irregular in size); posterior areas subshining, reticulate, the punctures deep, close, rather coarse. Vestiture confined to marginal areas.

Elytra 1.7 times as long as wide; sides straight and subparallel on basal two-thirds then converging very slightly to declivital margin, very broadly rounded behind (median portion almost straight); striae and interstriae punctures confused, the punctures moderately large and deep; surface subshining, indistinctly reticulate. Declivity oblique, excavated; an acutely, very strongly elevated subserrulate margin extending above from second interspace to apex, the area encompassed roughly obovate; the broad excavated area with striae punctures indistinct but evident in rows, sutural interstriae moderately elevated and bearing a row of close, rounded granules. Vestiture on sides and particularly on declivital margin moderately long and abundant; minute in declivital excavation.

MALE.— Similar to female except frons very slightly more evident.

TYPE LOCALITY.— Nine miles north of Perote, Vera Cruz, Mexico.

TYPE MATERIAL.— The female holotype, male allotype and four paratypes were taken at the type locality on June 28, 1953, at an elevation of 7200 feet from branches of *Pinus*, by S. L. Wood; two paratypes were collected 19 miles east of Tulancingo, Hidalgo, Mexico, on June 24, 1953, from the same host and collector; and six paratypes were taken at Las Vigas, Vera Cruz, Mexico, on June 5, 1962, from *Pinus*, by R. Coronado.

The holotype, allotype and some paratypes are in my collection; other paratypes are in collections of the Francis Huntington Snow Museum and the U. S. National Museum.

Pityophthorus hylocuroides, n. sp.

This species is allied to *virilis* Blackman (group VII) but differs by the steeper, flattened, almost *Hylocurus*-like declivity of the male, by the less deeply sulcate elytra of the female, and by the presence of pointed granules on the sutural interspace of the declivity (rarely one or two granules on lower third in *virilis*).

MALE.— Length 1.4 mm. (paratypes 1.1-1.5), 2.7 times as long as wide; body color dark reddish brown.

Frons convex above upper level of eyes, abruptly impressed and longitudinally concave below; surface smooth and shining with rather large, close, deep punctures; vestiture inconspicuous, sparse. Eye and antenna as in *virilis*.

Pronotum equal in length and width; sides almost straight and subparallel on basal half, broadly rounded in front; asperities arranged in three concentric rows between anterior margin and summit, about two indefinite partial rows at summit; anterior margin armed by about ten indefinite low teeth; transverse impression behind summit very poorly developed; posterior areas shining, with abundant minute points, the punctures rather coarse, deep, moderately close. Vestiture confined to marginal areas.

Elytra 1.8 times as long as wide; sides straight and subparallel to base of subtruncate declivity, broadly obtuse behind; striae not impressed, the punctures rather small, deep; interstriae about as wide as striae, shining, smooth except for a few minute lines and largely obliterated minute points, impunctate. Declivity, except between sutural striae, abrupt, very steep, almost subtruncate; second and third striae evident on upper half only, their punctures gradually decreasing in size; sutural interspace moderately, uniformly elevated to apex and bearing about eight small pointed tubercles; interspace two impressed, widened, impunctate, shining, elevated laterally; interspace three rather narrowly, moderately elevated from upper margin to middle of declivity and bearing four to six rather large, pointed tubercles; apical and lateral margins abruptly elevated forming three-fourths of a circle, terminated above the third interspaces. Vestiture sparse, inconspicuous.

FEMALE.— Similar to male except frons flattened from epistoma to well above eyes and finely closely punctured, bearing uniformly distributed rather long hair of equal length (as in *virilis*); declivity not as abrupt, the apical and lateral margins not elevated.

TYPE LOCALITY.— Eleven miles northeast of Jacala, Hidalgo, Mexico.

TYPE MATERIAL.— The male holotype, female allotype and 12 paratypes were collected at the type locality on June 22, 1953, at an elevation of 5100 feet, from branches of *Rhus trilobata* (or a very closely related species), by S. L. Wood.

The holotype, allotype and part of the paratypes are in my collection; other paratypes are in collections of the Francis Huntington Snow Museum and the U. S. National Museum.